

In the Claims

Please substitute the following claims:

1-41. (Canceled)

42. (Currently Amended) A composition comprising: an isolated, purified, or recombinant polynucleotide comprising a nucleotide sequence selected from the group consisting of the nucleotide sequences of SEQ ID NOs:1, 2, 3 and 4, or the complements thereof.

43. (Currently Amended) A composition comprising: an isolated, purified, or recombinant polynucleotide consisting essentially of a contiguous span of at least 12 nucleotides of any one of SEQ ID NOs:1, and 2, or the complements thereof, wherein said span includes a ~~FBC-1~~ related biallelic marker in said sequence that is selected from the group consisting of the biallelic markers at position 9494 of SEQ ID NO:1, position 1443 of SEQ ID NO:2, position 5247 of SEQ ID NO:2, position 6223 of SEQ ID NO:2, position 14723 of SEQ ID NO:2, position 19186 of SEQ ID NO:2, position 18997 of SEQ ID NO:2, position 19891 of SEQ ID NO:2, position 29617 of SEQ ID NO:2, position 42519 of SEQ ID NO:2, position 69324 of SEQ ID NO:2, position 69181 of SEQ ID NO:2, position 69146 of SEQ ID NO:2, position 76458 of SEQ ID NO:2, position 78595 of SEQ ID NO:2, position 82152, position 84522 of SEQ ID NO:2, position 84810 of SEQ ID NO:2, and position 89967 of SEQ ID NO:2 or biallelic markers in linkage disequilibrium therewith.

44. (Canceled)

45. (Previously Presented) The polynucleotide according to claim 43, wherein said contiguous span is 18 to 35 nucleotides in length and said biallelic marker is within 4 nucleotides of the center of said polynucleotide.

46. (Currently Amended) The polynucleotide according to claim 45, wherein said polynucleotide ~~consists of said contiguous span and~~ said contiguous span is 25 nucleotides in length and said biallelic marker is at the center of said polynucleotide.

47. (Previously Presented) The polynucleotide according to claim 43, wherein the 3' end of said contiguous span is located at the 3' end of said polynucleotide and said biallelic marker is present at the 3' end of said polynucleotide.

48. (Currently Amended) A composition comprising: an isolated, purified, or recombinant polynucleotide consisting essentially ~~comprising~~ of a contiguous span of 8 to 50 nucleotides of any one of SEQ ID NOs:1, 2, and 2 or the complements thereof, wherein the 3' end of said contiguous span is located at the 3' end of said polynucleotide, and wherein the 3' end of said polynucleotide is located within 20 nucleotides upstream of a ~~TBC-1~~-related biallelic marker in said sequence ~~that is selected from the group consisting of the biallelic markers at position 9494 of SEQ ID NO:1, position 1443 of SEQ ID NO:2, position 5247 of SEQ ID NO:2, position 6223 of SEQ ID NO:2, position 14723 of SEQ ID NO:2, position 19186 of SEQ ID NO:2, position 18997 of SEQ ID NO:2, position 19891 of SEQ ID NO:2, position 29617 of SEQ ID NO:2, position 42519 of SEQ ID NO:2, position 69324 of SEQ ID NO:2, position 69181 of SEQ ID NO:2, position 69146 of SEQ ID NO:2, position 76458 of SEQ ID NO:2, position 78595 of SEQ ID NO:2, position 82159, position 84522 of SEQ ID NO:2, position 84810 of SEQ ID NO:2, and position 89967 of SEQ ID NO:2 or biallelic markers in linkage disequilibrium therewith.~~

49. (Currently Amended) The composition of claim 48, wherein the 3' end of said polynucleotide is located 1 nucleotide upstream of said ~~TBC-1~~-related biallelic marker in said sequence.

50. (Currently Amended) A composition comprising: an isolated, purified, or recombinant polynucleotide which encodes a polypeptide comprising a contiguous span of at least 6 amino acids of SEQ ID NO:5, provided that said polypeptide is not murine TBC-1.

51. (Previously Presented) The polynucleotide according to claim 43 attached to a solid support.

52. (Previously Presented) An array of polynucleotides comprising at least one polynucleotide according to claim 51.

53. (Previously Presented) An array according to claim 52, wherein said array is addressable.

54. (Previously Presented) The polynucleotide according to claim 43 further comprising a label.

55. (Previously Presented) A composition comprising: a recombinant vector comprising a polynucleotide according to claim 43.

56. (Previously Presented) A composition comprising: a host cell comprising a recombinant vector according to claim 55.

57. (Withdrawn) A composition comprising: an isolated, purified, or recombinant polypeptide comprising a continuous span of at least 8 amino acids of SEQ ID NO:5.

58. (Withdrawn) A composition comprising: an isolated or purified antibody composition capable of selectively binding to an epitope-containing fragment of a polypeptide according to claim 57.

59. (Previously Presented) A method of making a purified or isolated *TBC-1* polypeptide encoded by a polynucleotide of claim 42; wherein said method comprises the steps of:

- (i) obtaining a cell capable of expressing said polypeptide;
- (ii) growing said cell under conditions suitable to produce said polypeptide; and
- (iii) isolating said polypeptide.

60. (Withdrawn) A method of genotyping comprising the steps of:

(a) obtaining a nucleic acid sample from an individual; and
(b) determining the identity of a polymorphic base at a *TBC-1*-related biallelic marker or the complement thereto in said nucleic acid sample, wherein the identity of the polymorphic base determines the genotype of the individual at said *TBC-1*-related biallelic marker and, wherein said *TBC-1*-related biallelic marker is positioned in SEQ ID NO:1 or SEQ ID NO:2.

61. (Withdrawn) A method according to claim 60, further comprising amplifying a portion of said sequence comprising the biallelic marker prior to said determining step.

62. (Withdrawn) A method according to claim 60, wherein said determining is performed by a hybridization assay, sequencing assay, microsequencing assay or enzyme-based mismatch detection assay.

63. (Withdrawn) A method according to claim 60, wherein said *TBC-1*-related biallelic marker is selected from the group consisting of the biallelic markers in positions 9494 of the SEQ ID NO:1, and 1443, 5247, 6223, 14723, 19186, 18997, 19891, 29617, 42519, 69324, 69181, 69146, 76458, 78595, 82159, 84522, 84810, and 89967 of the SEQ ID NO:2.

64. (New) A composition comprising an isolated, purified, or recombinant polynucleotide consisting of the nucleotide sequences of SEQ ID NOs: 1, 2, or the complements thereof.

65. (New) A composition comprising an isolated, purified, or recombinant human polynucleotide which encodes a polypeptide comprising a contiguous span of at least 6 amino acids of SEQ ID NO:5.

66. (New) The composition according to claim 65, wherein said polynucleotide encodes a polypeptide comprising SEQ ID NO:5.

67. (New) The composition according to claim 50, wherein said polynucleotide encodes a polypeptide comprising SEQ ID NO:5.

68. (New) A composition comprising: an isolated, purified, or recombinant polynucleotide which encodes a polypeptide comprising a contiguous span of at least 6 amino acids of SEQ ID NO:5, provided that said polynucleotide does not encode the murine TBC-1 polypeptide.

69. (New) The composition according to claim 68, wherein said polynucleotide encodes a polypeptide comprising a contiguous span of at least 8 amino acids.

70. (New) The composition according to claim 65, wherein said polynucleotide encodes a polypeptide comprising a contiguous span of at least 8 amino acids.

71. (New) The composition according to claim 50, wherein said polynucleotide encodes a polypeptide comprising a contiguous span of at least 8 amino acids.

72. (New) The composition according to claim 43, wherein said biallelic marker is selected from the group consisting of the biallelic markers at position 9494 of SEQ ID NO:1, position 1443 of SEQ ID NO:2, position 5247 of SEQ ID NO:2, position 6223 of SEQ ID NO:2, position 14723 of SEQ ID NO:2, position 19186 of SEQ ID NO:2, position 18997 of SEQ ID NO:2, position 19891 of SEQ ID NO:2, position 29617 of SEQ ID NO:2, position 42519 of SEQ ID NO:2, position 69324 of SEQ ID NO:2, position 69181 of SEQ ID NO:2, position 69146 of SEQ ID NO:2, position 76458 of SEQ ID NO:2, position 78595 of SEQ ID NO:2, position 82159, position 84522 of SEQ ID NO:2, position 84810 of SEQ ID NO:2, and position 89967 of SEQ ID NO:2.

73. (New) The composition according to claim 48, wherein said biallelic marker is selected from the group consisting of the biallelic markers at position 9494 of SEQ ID NO:1, position 1443 of SEQ ID NO:2, position 5247 of SEQ ID NO:2, position 6223 of SEQ ID NO:2, position 14723 of SEQ ID NO:2, position 19186 of SEQ ID NO:2, position 18997 of SEQ ID NO:2, position 19891 of

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SEQ ID NO:2, position 29617 of SEQ ID NO:2, position 42519 of SEQ ID NO:2, position 69324 of SEQ ID NO:2, position 69181 of SEQ ID NO:2, position 69146 of SEQ ID NO:2, position 76458 of SEQ ID NO:2, position 78595 of SEQ ID NO:2, position 82159, position 84522 of SEQ ID NO:2, position 84810 of SEQ ID NO:2, and position 89967 of SEQ ID NO:2